

WHAT WE CLAIM IS:

Sub B3  
1. A gas discharge display device for displaying a color image by means of first, second and third fluorescent substances having different emission colors, wherein a color to be reproduced by light-emission of the first to third fluorescent substances for displaying a white pixel is set to be different from a white color intended for display, and a filter is disposed on a front side of the first to third fluorescent substances for approximating a display color of the white pixel to the white color intended for display.

2. The gas discharge display device of claim 1, wherein a structural condition of a display element corresponding to the first fluorescent substance is different from structural conditions of other <sup>what?</sup> display elements, and a light-emission intensity of the display element corresponding to the first fluorescent substance is higher than a light-emission intensity of the display element corresponding to the first fluorescent substance which intensity is required in reproducing a white color intended for display by means of light emission of the display elements corresponding to the first to third fluorescent substances.

3. The gas discharge display device of claim 2, wherein each

of the display elements comprises a pair of electrodes for generating electric discharge between the electrodes to allow the fluorescent substances to emit light, and the structural condition is an area of the electrodes.

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4. The gas discharge display device of claim 3, wherein the area of the electrodes in the display element corresponding to the first fluorescent substance is larger than an area of the electrodes in the display element corresponding to the first fluorescent substance which area is required in reproducing the white color intended for display by means of the light emission of the display elements corresponding to the first to third fluorescent substances.

5. The gas discharge display device of claim 2, wherein each of the display elements comprises a pair of electrodes for generating electric discharge between the electrodes to allow the fluorescent substances to emit light, and the structural condition is an area of a light-emission region of the fluorescent substance.

6. The gas discharge display device of claim 5, wherein the area of the light-emission region of the fluorescent substance layer in the display element corresponding to the first fluorescent substance is larger than an area of the light-emission

region of the fluorescent substance layer in the display element corresponding to the first fluorescent substance which area is required in reproducing the white color intended for display by means of the light emission of the display elements corresponding to the first to third fluorescent substances.

7. The gas discharge display device of claim 2, wherein each of the display elements comprises a pair of electrodes for generating electric discharge between the electrodes to allow the fluorescent substances to emit light and dielectric substance layers that cover the respective electrodes, and the structural condition is a thickness of the dielectric layers.

8. The gas discharge display device of claim 7, wherein the thickness of the dielectric substance layers in the display element corresponding to the first fluorescent substance is smaller than a thickness of the dielectric substance layers in the display element corresponding to the first fluorescent substance which thickness is required in reproducing the white color intended for display by means of the light emission of the display elements corresponding to the first to third fluorescent substances.

9. The gas discharge display device of claim 1, wherein a light-emission intensity of a display element corresponding to

the first fluorescent substance is higher than a light-emission intensity of the display element corresponding to the first fluorescent substance which intensity is required in reproducing a white color intended for display by means of light-emission of the display elements corresponding to the first to third fluorescent substances.

10. The gas discharge display device of claim 1, wherein the filter has a color correction function for increasing a color temperature value.

11. The gas discharge display device of claim 1, wherein the filter has a characteristic of attenuating an intensity of light in a red wavelength region.

12. The gas discharge display device of claim 1, wherein the filter has a characteristic such that an average transmissivity of light in a green wavelength region is lower than an average transmissivity of light in a blue wavelength region and higher than an average transmissivity of light in a red wavelength region.

13. The gas discharge display device of claim 1, wherein the filter has a characteristic such that a transmissivity of a longer wavelength side of a red wavelength region is higher than a

transmissivity of a shorter wavelength side of the red wavelength region.

14. The gas discharge display device of claim 1, wherein the  
5 filter has a characteristic such that a wavelength providing the lowest transmissivity has a value within a range of 560 to 610 nanometers.

15. The gas discharge display device of claim 1, wherein the  
10 filter has a characteristic such that absorption peaks appear at least in a wavelength region of 470 to 520 nanometers and in a wavelength region of 560 to 610 nanometers.

16. The gas discharge display device of claim 1, wherein the  
15 gas discharge display device comprises a pair of substrates for forming a discharge space therebetween, and the filter is formed directly on an inner or outer surface of one of the substrates that constitutes a display surface.

20 17. The gas discharge display device of claim 1, wherein the gas discharge display device comprises a display panel incorporating a discharge space therein with arranged display elements, and the filter is fabricated separately from the display panel and disposed on a front side of the display panel.

18. The gas discharge display device of claim 1, wherein the gas discharge display device comprises a display panel incorporating a discharge space therein with arranged display elements and a transparent protection plate for protecting a display surface of the display panel, and the filter is disposed on an inner or outer surface of the protection plate.

19. The gas discharge display device of ~~claim 1 or 18~~<sup>claim 1</sup>, wherein the filter is a pigment filter.

20. The gas discharge display device of ~~claim 1 or 18~~<sup>claim 1</sup>, wherein the filter is a multi-layer film filter.

21. The gas discharge display device of claim 1, wherein the first fluorescent substance is a fluorescent substance for red composed of  $(Y, Gd) BO_3 : Eu$ , the second fluorescent substance is a fluorescent substance for green composed of  $Zn_2SiO_4 : Mn$  and the third fluorescent substance is a fluorescent substance for blue composed of  $BaMgAl_{10}O_{17} : Eu$ .

22. The gas discharge display device of claim 1, wherein the gas discharge display device has a discharge space filled with a Penning gas composed of neon and xenon as a discharge gas.